



L-2010-210
10 CFR 52.3

September 17, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Florida Power & Light Company
Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
Supplemental Response to Request for Additional Information Letter No. 002
Standard Review Plan Section 02.04.02 – Floods - Question No. 02.04.02-2 (eRAI 4806)

References:

1. NRC Letter to FPL dated August 2, 2010, Request for Additional Information Letter No. 002 Related to SRP Section 02.04.02 - Floods for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application (ML102140370)
2. FPL Letter L-2010-193 to NRC dated September 1, 2010, Response to Request for Additional Information Letter No. 002 (eRAI 4806) Standard Review Plan Section 02.04.02 - Floods

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its response to Question No. 02.04.02-2 in the Nuclear Regulatory Commission's (NRC) request for additional information provided in Reference 1 (eRAI 4806). The partial response to eRAI 4806 (Question Nos. 02.04.02-1 and 02.04.02-3) was provided by Reference 2. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

If you have any questions, or need additional information, please contact me at 561-691-7490.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 17, 2010

Sincerely,

A handwritten signature in black ink, appearing to read 'William Maher', is written over a horizontal line.

William Maher
Senior Licensing Director – New Nuclear Projects

Attachment: FPL Response to NRC RAI No. 02.04.02-2 (eRAI 4806)

cc:

PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO
Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

Florida Power & Light Company

700 Universe Boulevard, Juno Beach, FL 33408

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NRO

NRC RAI Letter No. PTN-RAI-LTR-002 Dated August 2, 2010

SRP Section: 02.04.02 – Floods

Question from Hydrologic Engineering Branch

NRC RAI Number: 02.04.02-2 (eRAI 4806)

With respect to the application's analysis of probable maximum flood (PMF), explain whether a sensitivity analysis with HEC-RAS would verify the assumption that additional interpolated cross-sections are not necessary. In particular, explain whether under a HEC-RAS analysis there would be any change in water surface elevations after adding interpolated cross-sections, confirm whether adding interpolated sections would establish a grid independent solution, and report on any changes to water surface profiles.

FPL RESPONSE:

The response to Nuclear Regulatory Commission (NRC) Hydrology Information Need HA-13 (FPL Letter to NRC L-2010-087, Attachment 8, dated April 30, 2010) is updated to indicate that the HEC-RAS solution is grid independent.

A sensitivity analysis of the HEC-RAS model in regard to additional interpolated cross sections was conducted. For the analysis, additional interpolated cross sections were added in such a way that the spacing between the cross sections was halved (i.e., the grid resolution is refined by a factor of two). The results of the analysis show that adding interpolated cross sections does not change the elevation of the maximum water level at the safety-related facilities. These results were expected because there are no abrupt changes in the channel cross sections in the HEC-RAS model flow paths near the safety-related facilities, and the simulated water surface profile has a mild slope. Therefore, the HEC-RAS model used to obtain the maximum water level at the safety-related facilities due to local PMP is grid independent.

An update to the COL application was included consistent with the response to HA-13 in COL Application Revision 1. As a result of this RAI, the COLA will be further updated to include additional wording regarding the sensitivity analysis results, as indicated below.

References:

None

This response is PLANT SPECIFIC.

ASSOCIATED COLA REVISIONS:

The last sentence of the first paragraph of FSAR Subsection 2.4.2.3.4 will be updated in a future COLA revision as follows:

There are no abrupt changes in the channel cross-sections in the HEC-RAS model flow paths near the safety-related facilities, and the simulated water surface profile has a mild slope. ~~Therefore, adding interpolated cross-sections is not expected to make any difference to the water level elevation results.~~

A sentence will be added at the end of the second paragraph of FSAR Subsection 2.4.2.3.4 in a future COLA revision as follows:

As shown in Table 2.4.2-215, the maximum local PMP water level in the power block area is approximately 24.5 feet NAVD 88, which is approximately 1.5 feet below the design grade of 26 feet NAVD 88 for safety-related structures. **A sensitivity analysis was performed by adding interpolated cross sections to the HEC-RAS model (Reference 217). The results of the sensitivity analysis indicate that the maximum water level in the power block area due to the local PMP is not sensitive to additional interpolated cross sections.**

Reference 217 will be added to FSAR Subsection 2.4.2.4 (following Reference 216 that pertains to the NRC RAI Number 02.04.02-1, eRAI 4806 response) in a future COLA revision as follows:

217. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-RAS, River Analysis System, Version 4.0, March 2008.

ASSOCIATED ENCLOSURES:

None